

**REMARKS**

Claims 1-3, 5-12 and 14-29 are pending in this application, of which claims 1, 10, 19, 23, and 27 are independent. Applicants amend claims 1, 10, 19, 23, and 27. No new matter has been added. Applicants respectfully submit that all of the pending claims are in condition for allowance, and respectfully request reconsideration of the outstanding rejections and allowance of all pending claims in view of the reasons set forth below.

Applicants thank the Examiner for withdrawing the 35 U.S.C. §101 rejection and the objection to the Specification.

**I. Claim Rejections under 35 U.S.C. § 103(a)**

Claims 1-3, 5-12, and 14-29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,114,149 to Aptus et al. (hereafter “Aptus”) in view of U. S. Patent No. 7,099,809 to Dori (hereafter “Dori”). Applicants respectfully traverse the rejection.

**A. Claims 1-3 and 5-9**

Applicants’ independent claim 1 recites:

1. A method comprising:
  - generating source code from a simulatable block diagram model represented in a source model language***, wherein one or more comments that identify a reference to an element in the block diagram model are included in the generated source code;
  - generating a code generation report from the generated source code, the generating of the code generation report comprising:
    - parsing the one or more comments in the generated source code;
    - replacing the reference to the element with a hypertext link that refers to the element of the block diagram model identified by the reference, the hypertext link providing a hyperlink to the source model language representing the block diagram model***; and
    - displaying the code generation report to a user.

Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest ***generating source code from a simulatable block diagram model represented in a source model language***, which is present in independent claim 1.

The Examiner suggests that Aptus discloses this feature at column 5, lines 55-67 and column 17, lines 56-68. Specifically, the Examiner states that the source code graphical diagram of Aptus is “equivalent to the block diagram model as currently claimed” (Office Action at page 11). However, the block diagram model of the present Application represents a dynamic system to be simulated and is represented in a source model language, such as Simulink (Application at page 7). The source code graphical diagram of Aptus is a set of GIF images generated from preexisting code that visually represent portions of the preexisting code (Aptus at col. 23, line 36, through col. 24, line 3). For example, in source code having a “public class Hello,” Aptus generates a class diagram having “a rectangular box labeled ‘Hello’ with a list of class members for the class ‘Hello’ inside of the rectangular box” (Aptus at col. 23, lines 44-51 and Figure 20, element 2010).

In order to clarify the difference between Aptus’ graphical diagram and the block diagram of claim 1, Applicants amend claim 1 to recite ***a simulatable block diagram model represented in a source model language***. Aptus’ graphical diagram is not simulatable. Moreover, Aptus’ graphical diagram is not represented in ***a source model language***, as recited in claim 1.

Dori also does not disclose or suggest ***generating source code from a simulatable block diagram model represented in a source model language***. The Examiner suggests that Dori discloses these elements in the Abstract, at column 2, and at column 15. Applicants respectfully submit that the Examiner misquotes Dori. In the last response, Applicants agreed that Dori does provide automatic code generation. However, claim 1 requires generating the source code ***from a simulatable block diagram model***. The Examiner quotes Dori as depicting “listings of code automatically generated from the diagram” (Office Action at page 11, emphasis added). However, the cited passage of Dori states that the listings of code are “automatically generated for the diagram” (Dori at col. 2, lines 57-58). Dori describes at col. 15, lines 14-31, how the OPL text description of a systems is transformed “all the way to executable code.”

In Dori, a user enters text into a script window (Dori at col. 3, lines 24-30). This text represents “Object Process Language (OPL)” Script, and it is this text, and not a ***simulatable block diagram model***, that Dori converts into C++ code (Dori at col. 15, lines 62-64).

For at least these reasons, Aptus and Dori do not disclose or suggest ***generating source code from a simulatable block diagram model represented in a source model language***, as required by claim 1.

Aptus and Dori do not disclose or suggest still other features of claim 1. For example, Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest ***replacing the reference to the element with a hypertext link that refers to the element of the block diagram model identified by the reference, the hypertext link providing a hyperlink to the source model language representing the block diagram model***, as further required by claim 1. The Examiner recognizes that Aptus does not replace comments with a hypertext link (Office Action at page 11). Instead, the Examiner suggests that Dori discloses this feature of claim 1.

The Examiner cites column 4, lines 8-14 of Dori for the above-quoted feature of claim 1. In the cited passage, Dori states that, when a user rests a cursor on a sentence in a “script window,” the tool can highlight “graphic constructs” corresponding to the sentence. This is not the same as replacing a reference in the comments of ***generated source code with a hyperlink to the source model language representing the block diagram model***. In Dori, a user enters text in “natural language,” for example “formal English sentences” (Dori at col. 3, lines 24-30). These sentences are shown in the script window 104, and it is these plain English constructs that a user might mouse over to highlight elements in the diagram window 102.

However, it is not clear how the above-described highlighting in Dori would enable one having ordinary skill in the art to replace a reference to an element in the comments of source code ***with a hypertext link that refers to the element of the block diagram model identified by the reference, the hypertext link providing a hyperlink to the source model language representing the block diagram model***, as recited in claim 1. Independent claim 1 recites modifying source code by replacing a reference with a hyperlink to source model language representing a block diagram model. On the other hand, Dori shows the user “plain English” representations of a diagram, and not source code (Dori at col. 15, lines 61-65 describing the generation of source code from the script text). Further, Dori links the plain English representation to the graphical depiction, and not the source model language representing the model. While a user explicitly established an association between the script and the diagram, it

does not appear that an association exists between the source code and any source model language representing the diagram.

For at least these reasons, Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, does not disclose or suggest each and every element of independent claim 1. Claims 2-3 and 5-9 depend from claim 1 and therefore include each and every element of claim 1. Thus, Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest each and every element of claims 2-3 and 5-9. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 1-3 and 5-9 under 35 U.S.C. § 103(a).

B. Claims 10-12 and 14-18

Applicants' independent claim 10 recites:

10. A system comprising:  
***means for generating source code from a simulatable block diagram model represented in a source model language***, the generated source code including at least one comment listing a reference to a block in the block diagram model;  
***means for generating a code generation report from the generated source code, the generating of the code generation report parsing the at least one comment in the generated source code and replacing the at least one comment with at least one hypertext link that refers to a corresponding element of the block diagram model, the hypertext link providing a hyperlink to the source model language representing the block diagram model***; and  
an output device for displaying the code generation report to a user.

Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest ***means for generating source code from a simulatable block diagram model represented in a source model language***, which is present in claim 10. Aptus does not discuss a simulatable block diagram model, nor a block diagram model that is represented in source model language. Dori generates code from an OPL script, and not from a simulatable block diagram model represented in source model language.

Further, Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest that ***the hypertext link provides a hyperlink to the***

***source model language representing the block diagram model***, which is present in claim 10.

As the Examiner acknowledges, Aptus does not include a link between the source code and the source model language (Office Action at page 11). Dori does not associate comments with a block in the block diagram model, and so also does not disclose that ***the hypertext link provides a hyperlink to the source model language representing the block diagram model***.

Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest each and every element of independent claim 10. Claims 11-12 and 14-18 depend from claim 10, and therefore include each and every element of claim 10. Thus, Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest each and every element of claims 11-12 and 14-18. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. §103(a) rejection of claims 10-12 and 14-18.

C. Claims 19-22

Applicants' independent claim 19 recites:

19. A computer program product residing on a computer readable medium having instructions stored thereon which, when executed by the processor, cause the processor to:

***generate source code from a simulatable block diagram model represented in a source model language***, the generated source code including at least one comment listing a reference to a block in the block diagram model;  
generate a code generation report from the generated source code, the generating of the code generation report parsing the at least one comment in the generated source code and replacing the at least one comment with at least one hypertext link that refers to a corresponding element of the block diagram model, ***the hypertext link providing a hyperlink to the source model language representing the block diagram model***; and

display the code generation report to a user.

Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest ***generating source code from a simulatable block diagram model represented in a source model language***, which is present in claim 19. Aptus does not discuss a simulatable block diagram model, nor a block diagram represented in a source

model language. Dori generates code from an OPL script, and not from a simulatable block diagram model represented in source model language.

Further, Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest that *the hypertext link provides a hyperlink to the source model language representing the block diagram model*, which is present in claim 19. As the Examiner acknowledges, Aptus does not include a link between the source code and the source model language (Office Action at page 11). Dori does not associate comments with a block in the block diagram model, and so also does not disclose that *the hypertext link provides a hyperlink to the source model language representing the block diagram model*.

Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest each and every element of independent claim 19. Claims 20-22 depend from claim 19, and therefore include each and every element of claim 19. Thus, Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest each and every element of claims 20-22. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. §103(a) rejection of claims 19-22.

D. Claim 23-26

Applicants' independent claim 23 recites:

23. A computing system comprising:  
a processor and  
a memory,  
wherein the processor and memory are configured to:  
***generate source code from a simulatable block diagram model represented in a source model language***, the generated source code including at least one comment listing a reference to a block in the block diagram model;  
generate a code generation report from the generated source code, the generating of the code generation report parsing the at least one comment in the generated source code and replacing the at least one comment with at least one hypertext link that refers to a corresponding element of the block diagram model, ***the hypertext link providing a hyperlink to the source model language representing the block diagram model***; and  
display the code generation report to a user.

Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest ***generating source code from a simulatable block diagram model represented in a source model language***, which is present in claim 23. Aptus does not discuss a simulatable block diagram model, nor a block diagram represented in a source model language. Dori generates code from an OPL script, and not from a simulatable block diagram model represented in source model language.

Further, Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest that ***the hypertext link provides a hyperlink to the source model language representing the block diagram model***, which is present in claim 23. As the Examiner acknowledges, Aptus does not include a link between the source code and the source model language (Office Action at page 11). Dori does not associate comments with a block in the block diagram model, and so also does not disclose that ***the hypertext link provides a hyperlink to the source model language representing the block diagram model***.

Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest each and every element of independent claim 23. Claims 24-26 depend from claim 23, and therefore include each and every element of claim 23. Thus, Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest each and every element of claims 24-26. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. §103(a) rejection of claims 23-26.

E. Claims 27-29

Applicants' independent claim 27 recites:

27. A method for generating a document having information about source code associated with a graphical model and providing a hyperlink referencing an element of the graphical model in the document, the method comprising the steps of:

***providing source code identifying an element of the graphical model, wherein the graphical model is a simulatable graphical model represented in source model language***, the source code including at least one comment listing a reference to a block in the graphical model;

generating a document from the source code, the generating of the document parsing the at least one comment in the generated source code and replacing the at least one comment with at least one hypertext link that refers to a

corresponding element of the graphical model, ***the at least one hypertext link providing a hyperlink to the source model language representing the graphical model***; and  
displaying the document to a user.

Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest ***generating source code from a simulatable block diagram model represented in a source model language***, which is present in claim 27. Aptus does not discuss a simulatable block diagram model, nor a block diagram represented in a source model language. Dori generates code from an OPL script, and not from a simulatable block diagram model represented in source model language.

Further, Applicants respectfully submit that Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest that ***the hypertext link provides a hyperlink to the source model language representing the block diagram model***, which is present in claim 27. As the Examiner acknowledges, Aptus does not include a link between the source code and the source model language (Office Action at page 11). Dori does not associate comments with a block in the block diagram model, and so also does not disclose that ***the hypertext link provides a hyperlink to the source model language representing the block diagram model***.

Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest each and every element of independent claim 27. Claims 28-29 depend from claim 27, and therefore include each and every element of claim 27. Thus, Aptus and Dori, alone or in any reasonable combination, do not disclose or suggest each and every element of claims 28-29. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. §103(a) rejection of claims 27-29.



**CONCLUSION**

In view of the above amendment, Applicants respectfully submit that the pending application is in condition for allowance. If the Examiner deems that issues persist, the Examiner is encouraged to contact the Applicants' attorney.

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